

**REMARKS**

**Status Of Application**

Claims 4-6, 13-16 and 23-35 are pending in the application; the status of the claims is as follows:

Claims 4-6, 13, 14, 27-30 and 35 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. Re 34,460 to Ishiguro et al. (hereinafter the "Ishiguro patent") in view of U.S. Patent No. 5,642,288 to Leung et al. (hereinafter the "Leung patent").

Claims 15 and 16 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the Ishiguro patent in view of the Leung patent, and further in view of U.S. Patent No. 4,912,518 to Matsuo et al, (hereinafter the "Matsuo patent").

Claims 23 and 24 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,825,988 to Collard et al. (hereinafter the "Collard patent") in view of the Leung patent, and further in view of the Ishiguro patent.

Claims 25 and 26 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the Collard patent in view of the Leung patent, in view of the Ishiguro patent, and further in view of the Matsuo patent.

Claims 31 and 33 are rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 5,008,709 to Shinada et al. (hereinafter the "Shinada patent") in view of U.S. Patent No. 5,987,171 to Wang (hereinafter the "Wang patent").

Claims 32 and 34 are rejected under 35 U.S.C. § 103(a) as being unpatentable over the Shinada patent, in view of the Wang patent, and further in view of U.S. Patent No. 5,930,006 to Yoshida et al. (hereinafter the "Yoshida patent").

**35 U.S.C. § 103(a) Rejections**

The rejection of claims 4-6, 13, 14, 27-30 and 35 under 35 U.S.C. § 103(a) as being unpatentable over the Ishiguro patent in view of the Leung patent, is respectfully traversed based on the following.

As noted by the Examiner, the Ishiguro patent does not disclose or suggest determining the state of a frame using pixel density data and, therefore, cannot anticipate the present invention. The Examiner, therefore, cited the Leung patent for its use of pixel density data. While the Leung patent appears to process pixel density data, it does so for a completely different purpose. As noted in the Summary of the Invention section (column 2, lines 14-37), the Leung patent's goal is to characterize a digitized image by a vector and to store the digitized image with other digitized images having similar vectors. That is, the Leung patent automates the manual process noted in the Background of the Invention section (column 1, lines 21 – 32) of selecting the best place to store a copy of a document.

The process found in the Leung patent, as shown in Figures 5-8 and discussed starting in column 5, line 66 of the Leung patent, involves segmenting pixel density data corresponding to an image into rectangles by calculating horizontal and vertical pixel distributions. Based upon these pixel distributions, various bounding rectangles are detected. After detecting each of these bounding rectangles for an image, the Leung patent then compares the rectangles with previously stored documents having matching rectangles and stores the image with these previously stored documents as shown in Figure 14. This use of pixel density data to determine storage location within a computer system as disclosed by the Leung patent does not suggest any utility as a method for determining whether a particular mode of operation is operable or not as found in either the Ishiguro patent or the present application. Therefore, while both the Ishiguro and Leung patents generally involve the very broad field of image processing, the goals of each are so different that one of skill in the art would not find a suggestion within the Ishiguro and Leung patents to combine them in the manner suggested by the Examiner. The Ishiguro patent admits of no problems associated with its method for determining the

state of a frame. Thus, one of skill in the art would not be looking to a document storage location patent, such as the Leung patent, for guidance in overcoming any state determination problems. For these reasons, the Applicant asserts that the combination of the Ishiguro and Leung patents does not render obvious claim 4 in which selection of an inoperable mode is prohibited based upon pixel density data.

Claims 5, 6 and 27 depend from claim 4. As claim 4 is considered non-obvious over the combination of the Ishiguro and Leung patents, claims 5, 6 and 27 are considered non-obvious for at least the same reasons.

Claim 13 includes the limitations that pixel density data be used to determine whether a mode is inoperable and to prohibit selection of a mode that is inoperable. As the Ishiguro and Leung patents have different goals or purposes as noted above, there is no suggestion within the Ishiguro and Leung patents to combine them. The Applicant, therefore, asserts that the combination of the Ishiguro and Leung patents does not render obvious claim 13 in which selection of an inoperable mode is prohibited based upon pixel density data.

Claim 14 depends from claim 13. As claim 13 is considered to be non-obvious over the combination of the Ishiguro and Leung patents, claim 14 is considered to be non-obvious for at least the same reasons.

Claim 28 includes the limitations that pixel density data be used to determine whether a mode is inoperable and to prohibit selection of a mode that is inoperable. As the Ishiguro and Leung patents have different goals or purposes as noted above, there is no suggestion within the Ishiguro and Leung patents to combine them. The Applicant, therefore, asserts that the combination of the Ishiguro and Leung patents does not render obvious claim 28 in which selection of an inoperable mode is prohibited based upon pixel density data.

Claims 29 and 30 depend, either directly or indirectly, from claim 28. As claim 28 is considered to be non-obvious over the combination of the Ishiguro and Leung patents, claims 29 and 30 are considered to be non-obvious for at least the same reasons.

Claim 35 includes the limitation that pixel density data be used to determine whether a stapler should operate. As the Ishiguro and Leung patents have different goals or purposes as noted above, there is no suggestion within the Ishiguro and Leung patents to combine them. This is especially true as the Leung patent discloses a method for selecting storage locations for digitized images. As digitized images will not require stapling, there is clearly no suggestion to combine the Ishiguro and Leung patents. The Applicant, therefore, asserts that the combination of the Ishiguro and Leung patents does not render obvious claim 35 in which stapler operation is controlled based upon pixel density data.

Accordingly, it is respectfully requested that the rejection of claims 4-6, 13, 14, 27-30 and 35 under 35 U.S.C. § 103(a) as being unpatentable over the Ishiguro patent in view of the Leung patent, be reconsidered and withdrawn.

The rejection of claims 15 and 16 under 35 U.S.C. § 103(a) as being unpatentable over the Ishiguro patent in view of the Leung patent, and further in view of the Matsuo patent, is respectfully traversed based on the following.

Claims 15 and 16 depend from claim 13 and by this dependence include the limitation that pixel density data be used to determine whether a mode is inoperable and to prohibit selection of a mode that is inoperable. As noted above, there is no suggestion to combine the Ishiguro and Leung patents. Therefore, the Applicant asserts that claims 15 and 16 are not rendered obvious by the combination of the Ishiguro and Leung patents, as their combination is not valid. The Matsuo patent does not provide any suggestion for combining the Ishiguro and Leung patents. Further, the Matsuo patent determines frame size using a pair of sensors SE5 and SE3 in the subroutine illustrated in Figure 14 and described in column 9, lines 16-37. Thus, the Matsuo patent does not teach determining frame size based upon pixel density data, but rather uses a timing method in which the time it takes for a document to pass by a sensor is used to determine the document's size. The Applicant thus asserts that the combination of the Ishiguro and Leung patents is not valid and that the Matsuo patent does not use pixel density data to prohibit selection of the two-side print mode as suggested by the Examiner. Because the Ishiguro and Leung

patents cannot be combined and because the Matsuo patent does not inhibit two-side printing using pixel density data, the combination of the Ishiguro, Leung and Matsuo patents does not render obvious the invention of claim 15.

The combination of the Ishiguro, Leung and Matsuo patents does not render obvious the invention of claim 16 for reasons similar to claim 15. The Matsuo patent does not use pixel density data to determine frame size and thus cannot inhibit printing in an economy print mode based upon pixel density data as required by claim 16. Likewise, the Matsuo patent fails to provide a suggestion to combine the Ishiguro and Leung patents. For these reasons, the combination of the Ishiguro, Leung and Matsuo patents does not render obvious the invention of claim 16.

Accordingly, it is respectfully requested that the rejection of claims 15 and 16 under 35 U.S.C. § 103(a) as being unpatentable over the Ishiguro patent in view of the Leung patent, and further in view of the Matsuo patent, be reconsidered and withdrawn.

The rejection of claims 23 and 24 under 35 U.S.C. § 103(a) as being unpatentable over the Collard patent in view of the Leung patent and further in view of the Ishiguro patent, is respectfully traversed based on the following.

As noted by the Examiner, the Collard patent does not disclose or suggest determining the state of a frame using pixel density data and, therefore, cannot anticipate the present invention. The Examiner, therefore, cited the Leung patent for its use of pixel density data. While the Leung patent appears to process pixel density data, it does so for a completely different purpose, to automatically select the best electronic storage location for a digitized image.

The process found in the Leung patent, the use of pixel density data to determine storage location within a computer system, does not suggest any utility as a method for determining whether a particular mode of operation is operable or not as found in the present application. Therefore, while both the Collard and Leung patents generally involve the very broad field of image processing, the goals of each are so different that one of skill in the art would not find a suggestion within the Collard and Leung patents to

combine them. For this reason, the Applicant asserts that the combination of the Collard and Leung patents does not render obvious claim 23 in which selection of an inoperable mode is prohibited based upon pixel density data.

The addition of the Ishiguro patent to the combination of the Collard and Leung patents similarly fails to render obvious the invention of claim 23. The Ishiguro patent provides no suggestion for combining the Leung patent with either the Collard or Ishiguro patents due to the Leung patent's goal of storing electronic files having similar features together. Without a suggestion to combine the Collard, Leung and Ishiguro patents, they cannot render obvious the invention of claim 23, and thus claim 23 is considered patentable.

Claim 24 depends from claim 23. As claim 23 is considered to be non-obvious over the combination of the Collard, Leung and Ishiguro patents, claim 24 is considered to be non-obvious for at least the same reasons.

Accordingly, it is respectfully requested that the rejection of claims 23 and 24 under 35 U.S.C. § 103(a) as being unpatentable over the Collard patent in view of the Leung patent and further in view of the Ishiguro patent, be reconsidered and withdrawn.

The rejection of claims 25 and 26 under 35 U.S.C. § 103(a) as being unpatentable over the Collard patent in view of the Leung patent, in view of the Ishiguro patent, and further in view of the Matsuo patent, is respectfully traversed based on the following.

Claims 25 and 26 depend from claim 23. As claim 23 is considered to be non-obvious over the combination of the Collard, Leung and Ishiguro patents, claims 25 and 26 are considered to be non-obvious for at least the same reasons. The addition of the Matsuo patent to the combination of the Collard, Leung and Ishiguro patents similarly fails to render obvious the inventions of claims 25 and 26. The Matsuo patent provides no suggestion for combining the Leung patent with either the Collard, Ishiguro or Matsuo patents due to the Leung patent's goal of storing electronic files having similar features together. Without a suggestion to combine the Collard, Leung, Ishiguro and Matsuo

patents, they cannot render obvious the inventions of claims 25 and 26, and thus claims 25 and 26 are considered patentable.

Furthermore, the Matsuo patent does not use pixel density data to determine frame size when prohibiting two-side or economy print modes. The Matsuo patent includes separate sensors that detect the size of a document based upon the time it takes for the document to pass the sensors. Therefore, even if the Matsuo patent provided a suggestion to combine the Collard, Leung, Ishiguro and Matsuo patents (which it does not), the Matsuo patent does not disclose or suggest prohibiting two-side or economy print modes based upon pixel density data as required by claims 25 and 26.

Accordingly, it is respectfully requested that the rejection of claims 25 and 26 under 35 U.S.C. § 103(a) as being unpatentable over the Collard patent in view of the Leung patent, in view of the Ishiguro patent, and further in view of the Matsuo patent, be reconsidered and withdrawn.

The rejection of claims 31 and 33 under 35 U.S.C. § 103(a) as being unpatentable over the Shinada patent in view of the Wang patent, is respectfully traversed based on the following.

As noted by the Examiner, the Shinada patent fails to disclose storing or editing pixel density data, using edited pixel density data to print an image and determining the size of an image based upon pixel density data. The Wang patent is cited for the proposition that it determines the size of an image based upon pixel density data. The Wang patent determines the size of connected components within a single image, determines the type of connected component (text, picture, etc.) and allocates memory accordingly (Figure 8 of the Wang patent), not the size of the overall image. As shown most clearly in Figures 12 and 14 of the Wang patent, a document page is broken into a number of connected components, generally corresponding to either text or pictures. Because the Wang patent is based upon determining the size of the various connected components using the pixel density data and allocating memory accordingly, the combination of the Shinada and Wang patents fails to disclose the use of pixel density data

to determine the size of an image. This is especially true when one considers that the goal of the Wang patent is to more efficiently analyze a document page for improved block selection and subsequent memory allocation and data processing.

Claim 33 similarly includes the limitation that pixel density data be used to determine image size. As the combination of the Shinada and Wang patents does not disclose the use of pixel density data to determine image size, the combination of the Shinada and Wang patents fails to render obvious the invention of claim 33.

Accordingly, it is respectfully requested that the rejection of claims 31 and 33 under 35 U.S.C. § 103(a) as being unpatentable over the Shinada patent in view of the Wang patent, be reconsidered and withdrawn.

The rejection of claims 32 and 34 under 35 U.S.C. § 103(a) as being unpatentable over the Shinada patent, in view of the Wang patent, and further in view of the Yoshida patent, is respectfully traversed based on the following.

Claim 32 depends from claim 31. As claim 31 is considered to be non-obvious over the combination of the Shinada and Wang patents, claim 32 is considered to be non-obvious for at least the same reasons. The addition of the Yoshida patent to the combination of the Shinada and Wang patents similarly fails to render obvious the invention of claim 32. In column 10, lines 3-7, the Yoshida patent describes that the size of a document is determined as a document passes a sensor SE51, and not by using pixel density data. Therefore, the combination of the Shinada, Wang and Yoshida patents fails to disclose the use of pixel density data to determine the size of a document, a limitation of claim 32 due to its dependence from claim 31. Thus, the combination of the Shinada, Wang and Yoshida patents cannot render obvious the invention of claim 32.

Claim 34 depends from claim 33. As claim 33 is considered to be non-obvious over the combination of the Shinada and Wang patents, claim 34 is considered to be non-obvious for at least the same reasons. The addition of the Yoshida patent to the combination of the Shinada and Wang patents similarly fails to render obvious the invention of claim 34. As noted above, neither the Shinada, the Wang nor the Yoshida



patents, nor a combination thereof disclose the use of pixel density data in determining the size of an image, a limitation of claim 34 due to its dependence from claim 33. Therefore, the combination of the Shinada, Wang and Yoshida patents cannot render obvious the invention of claim 34.

Accordingly, it is respectfully requested that the rejection of claims 32 and 34 under 35 U.S.C. § 103(a) as being unpatentable over the Shinada patent, in view of the Wang patent, and further in view of the Yoshida patent, be reconsidered and withdrawn.

### CONCLUSION

Wherefore, in view of the foregoing remarks, this application is considered to be in condition for allowance, and an early reconsideration and a Notice of Allowance are earnestly solicited.

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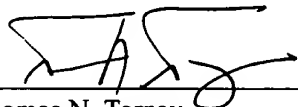
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